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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,259	06/16/2005	Florin Pricop	P02228	7529
40401	7590	12/29/2006	EXAMINER	
HERSHKOVITZ & ASSOCIATES			SGAGIAS, MAGDALENE K	
2845 DUKE STREET			ART UNIT	PAPER NUMBER
ALEXANDRIA, VA 22314			1632	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE		DELIVERY MODE	
3 MONTHS	12/29/2006		PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/539,259	PRICOP, FLORIN
	Examiner	Art Unit
	Magdalene K. Sgagias	1632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 11 August 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-12 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 16 June 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date <u>6/16/05</u>	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claims 1-12 are under consideration.

The spacing of the lines of the specification is such as to make reading difficult.

New application papers with lines 1½ or double spaced on good quality paper are required.

Specification

The spacing of the lines of the specification is such as to make reading difficult.

New application papers with lines 1½ or double spaced on good quality paper are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6 is rejected under 35 U.S.C. 102(b) as being anticipated by **Pricop**, RO117754(B), (AVICOLA) BUCURESTI SA, 30 July 2002 (2002.07.30, English Translation).

Pricop, teaches a procedure of genetic recombination for Galinacea hybrids breeding based on the linked transmission of the genes coding for sex and feathers

color, in which the cross of the homozygous for the bared gene (BB) Marans female with the recessive (bb) Rhode Island male yielded in F1 generation of ROBAR SL commercial hybrid (p 2, English Translation). Pricop does not teach that the F1 generation is 50% heterozygous (Bb) males and 50% heterozygous for the (bB) females, but inherently said F1 generation is embraced in Mendelian genetics, wherein the relationship between phenotype and genotype were first described by Mendelian genetics. Pricop teaches the growth period is 18 weeks (English Translation, p 7).

Pricop, also teaches the creation of an F2 generation by cross breeding the F1 generation wherein one day old offsprings were genetically assessed by the color of the down (p 4, English Translation). **Pricop**, teaches the exact determination of the types of colors, per sex, the genetic determination of which is based on the action of the heterosomal barred (B) and golden (b) genes, offers the advantage of eliminating cloacal sexing which causes trauma and mortality of the hybrid chickens, at one day of age a very stressful process for the chickens and this invention makes it possible to separate the day old hybrid chickens according to the color of the down (English Translation, p 5). **Pricop**, teaches the use of this line of process of producing the ROBAR SL hybrid is very important from the point of view of the genetic determination of the color of the down and the studies of genetic quality performed by the breeder permit us to determine that the barred gene (B) is dominant in relation to the golden gene (b) which is recessive (English Translation, p 5). **Pricop**, teaches the ROBAR SL hybrid females have different colored plumage than that of the parents and these results obtained both experimentally and in production conditions demonstrate that the barred

and golden genes are present in the homozygous state in the parents. In the ROBAR SL hybrid females the barred gene (B) is present in the Y chromosome (W for birds), demonstrating the existence of a heterozygous genotype (bB) and non-functionality of the mechanism of homozygosity (p 5). **Pricop** also notes the disadvantage of using these chickens in programs for obtaining commercial hybrids consists in the fact that around 250 eggs per hen was taken as the basis of selection, as a result of the system of selection known and applied, taking into consideration only the additive genetic interactions, thus increasing the frequency of homozygotes in the population, which has been compensated by other epistatic actions of the genes, which keep them in genetic equilibrium (p 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pricop**, RO117754(B), (AVICOLA) BUCURESTI SA, 30 July 2002 (2002.07.30, English Translation) in view of **Campo** (Poultry Science, 70: 1469-1473, 1991).

Pricop, teaches a procedure of genetic recombination for Galinacea hybrids breeding based on the linked transmission of the genes coding for sex and feathers

color, in which the cross of the homozygous for the bared gene (BB) Marans female with the recessive (bb) Rhode Island male yielded in F1 generation of ROBAR SL commercial hybrid (p 2, English Translation). Pricop does not teach that the F1 generation is 50% heterozygous (Bb) males and 50% heterozygous for the (bB) females, but inherently said F1 generation is embraced in Mendelian genetics, wherein the relationship between phenotype and genotype were first described by Mendelian genetics. Pricop teaches the growth period is 18 weeks (English Translation, p 7).

Pricop, also teaches the creation of an F2 generation by cross breeding the F1 generation wherein one day old offsprings were genetically assessed by the color of the down (p 4, English Translation). **Pricop**, teaches the exact determination of the types of colors, per sex, the genetic determination of which is based on the action of the heterosomal barred (B) and golden (b) genes, offers the advantage of eliminating cloacal sexing which causes trauma and mortality of the hybrid chickens, at one day of age a very stressful process for the chickens and this invention makes it possible to separate the day old hybrid chickens according to the color of the down (English Translation, p 5). **Pricop**, teaches the use of this line of process of producing the ROBAR SL hybrid is very important from the point of view of the genetic determination of the color of the down and the studies of genetic quality performed by the breeder permit us to determine that the barred gene (B) is dominant in relation to the golden gene (b) which is recessive (English Translation, p 5). **Pricop** teaches the ROBAR SL hybrid cocks have plumage consisting of feathers of red color, on head and neck, respectively of feathers of barred color on the body. The color plumage of the hybrid

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cocks is intermediate between the color of the plumage of the parents. The hybrid females have plumage of reddish black color on the head and neck, respectively of black color on the body, a fact that demonstrates that both genes (barred and golden) are present in the hybrid chickens (heterogametic sex). **Pricop**, teaches the ROBAR SL hybrid females have different colored plumage than that of the parents and these results obtained both experimentally and in production conditions demonstrate that the barred and golden genes are present in the homozygous state in the parents. In the ROBAR SL hybrid females the barred gene (B) is present in the Y chromosome (W for birds), demonstrating the existence of a heterozygous genotype (bB) and non-functionality of the mechanism of homozygosity (p 5). **Pricop** also notes the disadvantage of using these chickens in programs for obtaining commercial hybrids consists in the fact that around 250 eggs per hen was taken as the basis of selection, as a result of the system of selection known and applied, taking into consideration only the additive genetic interactions, thus increasing the frequency of homozygotes in the population, which has been compensated by other epistatic actions of the genes, which keep them in genetic equilibrium (p 3). **Pricop** differs from the claimed invention by not teaching the heterozygous (bB) females have black feathers on the body and reddish-black feathers on the neck, which is different both from the red feathers of the homozygous male parent and from the heterozygous males, this is due to the dominant sex gene (SDW) located on the chromosome W with epistatic action on the barred gene, which allows day-old sexing of the recombinant hybrids by the feather color and which in relation with the recessive (sdw) allele located on the chromosome Z determines the formation of the hererozygous (SDWsdw) female

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genotype while in relation with the recessive (sdw) sex gene present in both chromosomes Z forms the recessive homozygous (sdwsdw) male gonotype.

However, at the time the claimed invention was made, **Campo** teaches use of the sex-linked barring (B) gene for chick sexing on an Eumelatonic Columbian background. **Campo** teaches sex-linked crosses involving the barred (B) and unbarred (b+) alleles can be used for sex determination of day old chicks in combination with the eWh/eWh, Co/Co, Mi/MI genotype, which provides a black down background for the B-induced white head spot (p 1472, 1st column). Campo reports that sex chick down segregation in the F1 generation from the mating Melatonic Prat to barred melatonic Columbian was 94- 100% accuracy (p 1472, Table 3). As such, Campo provides sufficient motivation for one of ordinary skill in the art to apply the Mendelian genetics of Pricop for epistatic action on the barred gene, which allows day-old sexing of the recombinant hybrids by the feather color and which in relation with the recessive (sdw) allele located on the chromosome Z determines the formation of the hererozygous (SDWsdw) female genotype while in relation with the recessive (sdw) sex gene present in both chromosomes Z forms the recessive homozygous (sdwsdw) male gonotype.

Accordingly, in view of the teachings of Campo, it would have been obvious for one of ordinary skill in the art, at the time the claimed invention was made, to modify the breeding technology of Pricop by use of a Campo technology in the Rhode island Marans x Marans chicks with a reasonable expectation of success. One of ordinary skill in the art would have been sufficiently motivated to make such a modification since the cloacal sexing causes trauma and mortality of the hybrid chickens, at one day of age a very stressful process for the chickens and this invention

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makes it possible to separate the day old hybrid chickens according to the color of the down.

Thus, the claimed invention as a whole is clearly *prima facie* obvious in the absence of evidence to the contrary.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magdalene K. Sgagias whose telephone number is (571) 272-3305. The examiner can normally be reached on Monday through Friday from 9:00 am to 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Paras, Jr., can be reached on (571) 272-4517. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Magdalene K. Sgagias, Ph.D.
Art Unit 1632

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